R. H. DAY

PACIFIC SEABIRD GROUP

BULLETIN

Vol. 3 Winter 1976 No. 2

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PACIFIC SEABIRD GROUP

The Pacific Seabird Group (PSG) was formed in 1972 out of a need for better communication among Pacific seabird researchers. The Group acts to coordinate and stimulate the field activities of its members and to inform its membership and the general public of conservation issues relating to Pacific seabirds and the marine environment. Current activities include the development of standard techniques and reporting forms for colony censusing, pelagic observations, and beached bird surveys. Policy statements are issued on conservation issues of critical importance. While the PSG's primary area of interest is the West Coast of North America and adjacent areas of the Pacific, it is hoped that seabird enthusiasts in other parts of the world will join and participate in the Group. Annual dues for membership in the Group are $5.00 and are payable to the Secretary or Treasurer (addresses on back cover). Members receive the PSG Bulletin.

PACIFIC SEABIRD GROUP BULLETIN

The Pacific Seabird Group Bulletin is issued in the spring or summer and fall of each year and contains news of interest to PSG members. Regional reports include a listing of current research and information on seabird conservation. The Bulletin does not act as an outlet for the results of scientific research but welcomes articles on seabird conservation, seabird research, or other topics that relate to the objectives of the Group. Articles should be submitted to the Editor. Back issues of the Bulletin (starting with spring 1974) are available from the Treasurer for $2.50 each.

COMMITTEE COORDINATORS

Pelagic observations:

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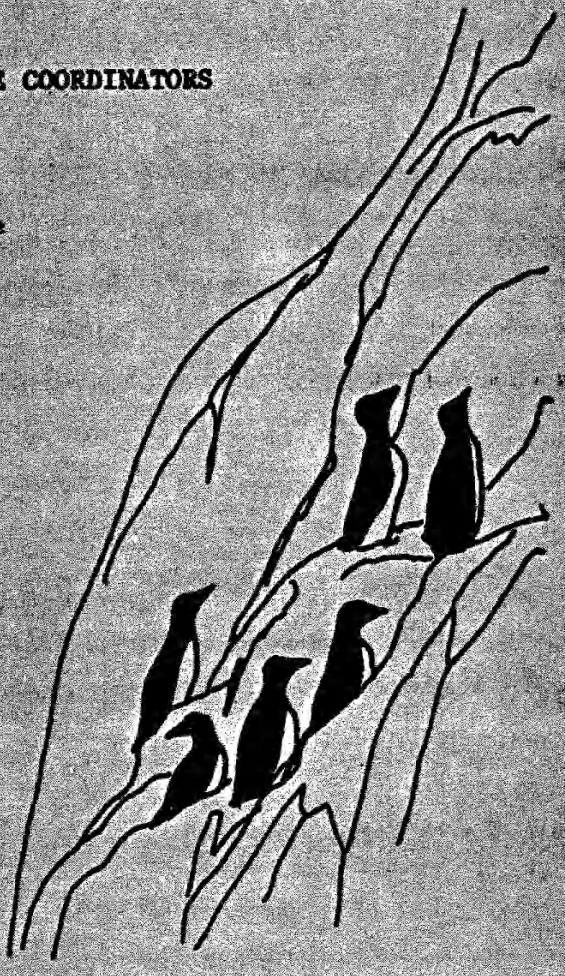

30 January 1977

Dear PSG Member,

Attached is the last number of the 1976 PSG Bulletin. Since PSG is still in the growing stages, you may be receiving a bulletin for which you paid no subscription or dues. If this is so, please take this as a "gentle hint" for your 1976 dues. PSG is growing, and we need your support. Membership dues are $5.00 per year.

According to our records, your dues are paid through 1976.
The following checked box applies to you:

☐ We are sending along the last 1976 number as a final request for 1976 dues.

☑ Your 1977 membership fee is due.

☐ Your subscription is an institutional one. Receipt of the PSG Bulletin is a matter of courtesy; however, if your agency or institution can afford it, please forward $5.00.

IMPORTANT: Check your records against ours in the membership list of this issue of the PSG Bulletin. Address all inquiries on any discrepancies to Joan Scott, the Treasurer.

IMPORTANT: Dues payments and address changes should be sent to Joan Scott, as well.

DUES PAYMENT/ADDRESS CHANGE FORM

TO: Treasurer, Pacific Seabird Group

1) Dues for _____ are enclosed, @ $5.00/year = $_____

2) Payment for back issues for _____ is enclosed @ $2.50/year = $_____

Total Amt. Enclosed = $_____

OLD ADDRESS:

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Joan Scott, Treasurer PSG
Post Office Box D
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PACIFIC SEABIRD GROUP

BULLETIN

VOLUME 3 WINTER 1976 NUMBER 2

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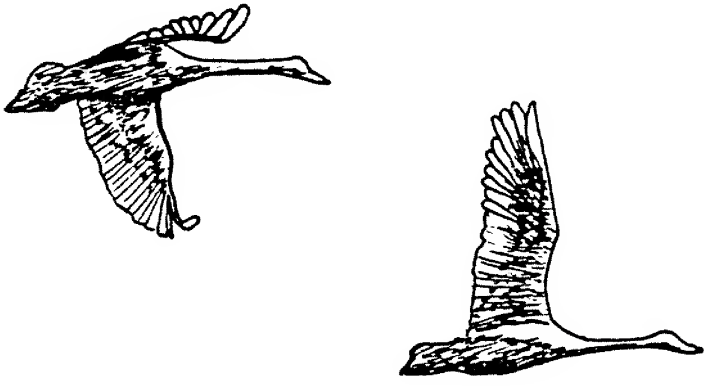
THE CHAIRMAN'S PAGE

There have been few people studying seabirds in North America who have not been affected by the current wave of funding for environmental studies on the outer continental shelf. These studies are being conducted in order to obtain sufficient information to write environmental impact statements prior to oil and gas lease sales. The program being run by the National Oceanographic and Atmospheric Administration in the United States was forced to fund a large number of studies with little time allowed for planning. This resulted in the funding of a number of projects whose relationship to oil and gas development was questionable. Recently, the Alaskan OCS program began taking an ecosystem approach to its studies so that the final environmental impact statement will be the result of a number of integrated studies rather than a series of disjointed, esoteric research units. An ecosystem approach also has the benefit of making a major contribution to science and not simply fulfilling a governmental requirement.

The funding has had a number of effects on seabird studies. One of the immediate results has been to channel researchers into ecological studies. People who might have conducted behavioral, taxonomic, or physiological studies are instead working on breeding biology and feeding ecology. The impact of OCS funding will be seen in the literature in the next five to ten years. It is likely that future ornithologists will see the 1970's as the great leap forward in seabird research. The major contributions that the OCS programs will make may not be apparent until sometime after most of the field work is done, and the impact statements have been written. The OCS programs have a vast geographic range and will thus provide a huge data base. The data managers running the programs cannot be expected to use the information for its best purpose, which is to provide an overview of seabird biology on the West Coast of North America. In a few years, it will be possible to analyze breeding success and pelagic densities from southern California to northern Alaska. It will take a broadly based group like the PSG to ask the important questions that the OCS data can answer and then organize symposia to address the questions. The structure of the PSG is well suited for such a task and the Group can look forward to playing a major role in what could prove to be the most meaningful work on northern Pacific seabirds.

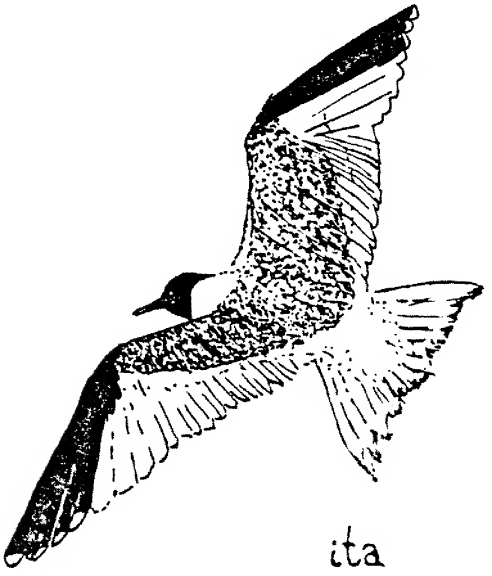
George J. Divoky
Chairman, 1976



EINAR BRUN

Ornithology has suffered an irreplaceable loss in Einar Brun, Professor of Zoology and Director of the Marine Biological Station at Tromsoe University, North Norway. He was born in Sandefjord in 1936 and obtained his first degree in 1963. He then came to Britain as warden of the Calf of Man Bird Observatory and completed a PhD. on the biology of echinoderms at the University of Liverpool's Marine Biological Station at Fort Erin, Isle of Man in 1969. He was appointed head of the Zoology Department at Tromsoe University the following year, and Professor of Marine Biology in 1972, and was currently working on the life and artificial production of salmon. While pursuing his successful career he also organized a more thorough survey of Norwegian seabirds than we have yet managed for Britain, reporting the results in a long series of papers on individual species, places and topics from the early 1960's which are fortunately reviewed in his contribution to the proceedings of the Seattle conference on northern American seabirds last year. He eventually turned his university department into a key location for ornithological studies, helping to develop the journal, Ornis Scandinavica to promote them in the process. Recently he has been concerned with the assessment of the hazard presented by oil exploration to seabirds, and bought his own Piper Cub to carry out aerial surveys for this purpose. He was killed when his aircraft crashed into the Vega Sea after he encountered bad weather approaching Bardufoss Airport in Troms on the evening of July 13th, 1976. He was a pleasant, stocky, determined character with a neat beard, of vast energy, knowledge, ability and daring concealed behind a quiet, modest demeanor, with whom it was a pleasure and privelage to deal. I regard a trip I made to watch him count the birds on the great cliffs around Bear Island from a little rubber boat in the summer of 1972 as one of my most rewarding ornithological experiences. While he did not take foolish risks, he fearlessly explored the boundaries of human achievement, and it is a tradgedy that eventually his luck has failed. He should be remembered as the nearest thing we had to a hero in modern ornithology.

W. R. P. Bourne
The British Seabird Group
September 1976



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I. Committee Report, Pelagic Observations.

The reason for existence, but elusive goal of the pelagic committee has been the production of a manual which would attempt to standardize pelagic methods. While the committe has pursued this goal in fits and starts, but mostly stops, the NOAA-Bureau of Land Management (BLM) Outer Continental Shelf Energy Assessment Program (OCSEAP) has come roaring upon the pelagic scene, catching the committee sleepily with their methods and forms down. However, this has proven beneficial to the committee who suddenly find their manual being written for them. Concurrent with others on the Pacific Coast, the U. S. Fish and Wildlife Service, Office of Biological Services, Anchorage, Alaska, has been deeply involved in these OCSEAP pelagic studies. They are putting the final touches on a pelagic methods manual for use by their own personnel in conducting pelagic studies. It will contain, among other things, sections on shipboard and aerial observing methods, seawatch methods, and the identification of difficult species and species groups at sea. This manual will be modified to fit the generalized requirements of a PSG manual and submitted for comments and criticism to the original pelagic committee members and others on the Pacific Coast who have recently been particularly active in pelagic work. A "final" PSG pelagic manual will hopefully be available for general distribution by the 1977 field season.

A bulletin board display and a pelagic methods working session highlighted committee activities during the 1975 Asilomar meeting. Gerry Sanger moderated the working session, which was attended by about 30 people. Active participants in the session were Jim Bartonek, Juan Guzman, Dennis Heinneman, Wayne Hoffman, and Jay Quast, who have been directly or indirectly involved with OCSEAP pelagic bird studies in Alaskan waters, and Ken Briggs and George Hunt, who have been conducting similar studies in Southern California. David Nettleship briefly reviewed the Canadian PIROP program (Program for Integrated Research on Pelagic Birds) in the North Atlantic. All observers seemed to be doing basically the same type of pelagic observing: identifying and counting birds as their ship or aircraft traveled in a straight line (equivalent to transect lines on land). The PIROP program thus far has reported and analyzed their pelagic data in terms of relative abundance (number of birds seen per 10-minute observation period), while virtually all West Coast workers routinely estimate actual abundance (number of birds seen per unit area of sea surface). Useful and sometimes lively discussion was generated during the session by differences in opinion on how to measure or estimate transect widths, the time and distance needed for a transect, the relative merits of shipboard and aerial censuses, and probably more than anything else, what should be included as standard data and how resulting data should be computerized and managed.

Preceeding the 1975 PSG meeting and the working session by a couple of days, and perhaps even overshadowing it, were meetings organized by NOAA-BLM, OCSEAP data and program managers, which attempted to organize and standardize the collection and management of all types of marine bird data from the various OCSEAP projects, including pelagic studies. The pelagic meeting was quite useful in reconciling differences of opinion

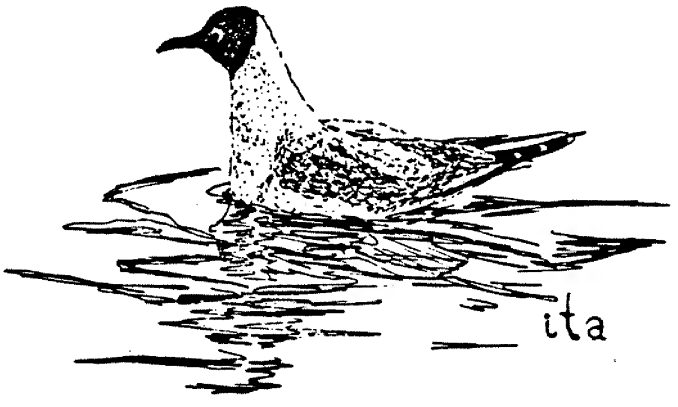
on pelagic methods and data management. It further provided a point of departure for the PSG working session, which tended to be rather more casual and philosophical.

Gerald A. Sanger
Coordinator, Pelagic Committee
June 1976

II. Treasurer's Report, 1976:

RECEIPTS	
1975 Annual Meeting	$1726.62
Membership Dues	1447.68
Sale of Back Issues of PSG Bulletin	10.00
Interest in Savings Account	3.39
Total Receipts	$3187.69
DISBURSEMENTS	
1975 Annual Meeting	1426.75
PSG Bulletin (printing, postage, freight)	468.35
Returned Checks	12.50
Treasurer's Expenses (postage, supplies)	82.10
Total Disbursements	$1989.70
Excess of Receipts over Disbursements	$1197.99
GENERAL CASH FUND	
Checking Account	894.60
Savings Account	303.39
Balance in all accounts as of December 31st, 1976	$1197.99

David A. Manuwal
Treasurer, PSG
December 1976



III. Pacific Seabird Group Membership List.

The year 1976 saw a major increase in Pacific Seabird Group membership. The following list is current through January 1977.

NAME	ADDRESS-AFFILIATION	DUES PAID THRU
AINLEY, David G.	Pt. Reyes Bird Observatory, Box 8, Alder Road, Bolinas, CA 94924.	1977
ALCORN, Gordon D.	Dept. of Biology, Univ. of Puget Sound, Tacoma, WA, 98416.	1975
ALDERSON, George	323 Maryland Ave., NE, #5, Washington, DC, 20002.	1976
ALLEN, Jeffry	POB 2871, Kodiak, AK,99615.	1975
AMARAL, Michael	Wildl. Sci. Group, Coll. of Forest Res., AR-10, Univ. of Washington, Seattle, WA,98195.	1977
AMES, Jack	Dept. Fish and Game, 2201 Garden Pl., Monterey, CA, 93940.	1976
ANDERSON, Daniel W.	Div. Wildlife/Fisheries, Univ. Calif., Davis, CA, 95616.	1977
ANDERSON, Kathleen S.	Manomet Bird Observ., Manomet, MA, 02345.	1976
ARNESON, Paul D.	Alaska Dept. Fish/Game, 333 Raspberry Rd., Anchorage, AK, 99502.	1978
ARVEY, William	POB 1457, Homor, AK, 99603.	1975
AUKE BAY FISH. LAB	POB 155, Auke Bay, AK, 99821.	1976
BAILEY, Edgar P.	813 D St., Anchorage, AK,99501.	1977
BAILEY, Stephen F.	Mus. Vert. Zool., Univ. of Calif., Berkeley, CA, 94720.	1977
BALTZ, Donald M.	Div. Wildlife/Fisheries, Univ. Calif., Davis, CA, 95616.	1977
BARNFIELD MARINE STA.	Barnfield, BC, VOR IBO.	1976
BARRET, Robert T.	Marine Biol. Sta., 9000 Tromsø, NORWAY.	1977
BARTLE, J. A.	National Mus. New Zealand, Private Bag, Wellington, NEW ZEALAND.	1977
BARTONEX, J. C.	U. S. F. W. S., 800 A St., Suite 110, Anchorage, AK, 99501.	1977
BAYER, Range	423 SW 9th, Newport, OR, 97365.	1977
BEAM, John	1105 Spear Ave., Arcata, CA, 95521.	1976
BEDARD, Jean H.	Dept. de Biologie, Université Laval, Québec, QUÉ.	1977
BERGEN, James	242 Sierra Vista, Ridgecrest, CA, 93555.	1977
BERKNER, Alice	Aqualec Park, Berkeley, CA, 94720.	1976

BERTO, Frances	10 Ash Ave., Apt. A, San Anselmo, CA, 94960.	1976
BERTRAND, Gerard	CEQ, Exec. Off. of the President, Wash., DC, 20006.	1975
BLICK, James	Div. Biol., Univ. Mich., Ann Arbor, MI, 48109.	1977
BLOKPOEL, Hans	CWS, 2721 Hwy. 31, Ottawa, ONT, KIA OH3.	1977
BOERSMA, Dee	Inst. Environ. Studies, Univ. Wash., Seattle, WA, 98195.	1976
BOURNE, W. R. P.	Zoology Dept., Tillydrone Ave., Aberdeen, SCOTLAND, AB9 2TN.	1977
BRADLEY, Stephen W.	9904 87th Ave., Edmonton, ALTA.	1976
BRADSTRAT, Michael S. W.	POB 117, Port Rowan, ONT, NOE IMO.	1977
BRATTSTROM, Bayard	Dept. Biol., Calif. State Univ., Fullerton, CA, 92634.	1977
BRIGGS, Kenneth T.	Coastal Mar. Lab, Univ. Calif., Santa Cruz, CA, 95064.	1975
BROWN, R. G. B.	CWS, Mar. Ecol. Lab., Bedford Institute, Dartmouth NSCOTIA.	1976
BROWNELL, Robert L., Jr.	Div. Mammals, NHB398, Smithsonian Inst., Wash., DC, 20560.	1977
BROWNING, M. Ralph	4303 N Pershing Dr., Apt. 2, Arlington, VA, 22203.	1976
BRUCE, Charles	Route 1, POB 325, Corvallis, OR, 97330.	1977
BUCK, Slader	23155 Dolorosa St., Woodland Hills, CA, 91363.	1976
BURCHAM, Dirk	2230 Home Dr., Apt. B, Eureka, CA, 95501.	1977
BURKE, William F.	Dept. Zool., Univ. Hawaii, Honolulu, HI, 96822.	1976
BURRELL, Galen	11525 32d Ave. NE, Seattle, WA, 98125.	1977
BUTLER, John	5194 Galt Way, San Diego, CA, 92117.	1977
BYRD, Vernon	Aleutian Ids. Nat. Wildl. Refuge, POB 5257, Adak, AK.	1977
CAIRNS, David	Dep. de Biologie, Université Laval, Québec, Qué.	1977
CANADIAN WILDL. SERVICE	Eastern Reg. Libr., 2721 Hwy. 31, Ottawa, ONT, KlA OH3.	1977
CARINS, M.	POB 156, Civic Square, ACT 2608, AUSTRALIA.	1977
CAUSEY, Sherman D.	Dept. Ecol./Evol. Biol., Univ. Calif., Irvine, CA, 97664.	1977
CHANDIK, Theodore A.	4238 Ruthelma Ave., Palo Alto, CA, 94306.	1977
CHEESEMEN, Douglas, Jr.	Biol. Dept., DeAnza College, 21250 Stevens Cr. Blvd., Cupertino, CA, 95014.	1976
CHU, Ellen	137 Applied Sciences, Univ. Calif., Santa Cruz, CA, 95064.	1977
CHURCH, Jane P.	4990 State Rt. 1, Stinson Beach, CA, 94970.	1977

CLAPP, Roger B.	Natl. Fish. & Wl. Service, Natl. Museum Natural History, Washington, D.C., 20560.	1976
CLINE, Dave	POB 1445M, SRA, Anchorage, AK, 99502.	1976
COGSWELL, Howard L.	Dept. Biol. Sci., Calif. State Univ., Hayward, CA, 94542.	1976
COLLIER, Gerald	4311 Miriam Pl., La Mesa, CA, 92041.	1977
COLLINS, Charles T.	Dept. Biol., Calif. State Univ., Long Beach, CA, 90840.	1976
COLORADO State Univ.	Libr., Serials Section, Fort Collins, CO, 80521.	1977
CONANT, Sheila	3663 Alani Drive, Honolulu, HI, 96822.	1977
CONNORS, Peter	POB 247, Bodega Bay, CA, 94923.	1977
COOPER, John	Percy Fitzpatrick Inst. African Ornithology, Univ. Capetown, Rondebosch 7700, SO.AFRICA.	1976
COULTER, Malcolm	443 5th St. NE, Washington, D.C., 20002.	1977
COWAN, Ian McTaggart	2088 Acadia Rd., Vancouver, B.C., Canada, V6T IR5.	1977
CRAIGHEAD, Lance	Dept. Wldl. Ecol., Univ. Wisc., Madison, WI, 53706.	1978
CRAIG, Robert Brice	Dept. Zool., Univ. Calif., Davis, CA, 95616.	1976
CROCKETT, David E.	21 McMillan Ave., Kamo, Northland, NEW ZEALAND.	1975
CURL, Herbert Jr.	Rx4 OCSEAP Office, ERL/NOAA, Boulder, CO, 80302.	1977
CUSTER, Thomas W.	Patuxent Wildl. Res. Ctr., Laurel, MD, 20811.	1977
DAU, Christian	POB 346, Bethel, AK, 99559.	1977
DAY, Robert H.	Div. Life Sci., 203 Bunnell, Univ. Alaska, Fairbanks, AK, 99701.	1976
DEPT. FISH & GAME	Nongame Wildl. Investigations, 1416 Ninth St., Sacramento, CA, 95814.	1977
DEPT. OF GAME (Library)	600 No. Capital Way, Olympia, WA.	1977
DeWEESE, Lawrence R.	1328 E. Mulberry, Fort Collins, CO, 80521.	1975
DICK, Matt	POB 825, Kodiak, AK, 99615.	1976
DILLON, Bill	28480 Mission Blvd. #201, Hayward, CA, 94544.	1977
DINNEFORD, Bruce	4237 Lark Ellen Ave., Cuvina, CA, 91722.	1975
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DIVOKY, George J.	Alaska Dept. Fish & Game, 1300 College Rd., Fairbanks, AK, 99701.	1977

DONAGHO, Walter R.	c/o Rt. 7, Box 485 A, Olympia, WA, 98506.	1977
DOOLEY, Peggy	Coop. Wildl. Res. Lab., So. Ill. Univ., Carbondale, IL, 62901.	1975
DORAN Associates, Ltd.	2230 Yukon St, Vancouver, BC, Canada V5Y 3P2.	1976
DRURY, Wm. H.	College of the Atlantic, Bar Harbor, Maine, 04609.	1978
DUFFY, David C.	Dept. Biol., Princeton Univ., Princeton, NJ, 08540.	1976
DUNBAR, W. Patrick	2001 Central Ave., Apt. F, Alameda, CA, 94501.	1975
DUNN, Erica H.	POB 160, Port Rowan, Ont., Canada, NOE 1MO.	1975
DWYER, Thomas J.	USF&WS, West. Alaska Ecol. Sci., 813 D St., Anchorage, AK, 99501.	1975
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ELLIOT, Bruce G.	485 Manzanita, Felton, CA, 95018.	1976
ENGLE, Helen	4011 Alameda Ave., Tacoma, WA, 98466.	1976
ENO, Amos Stewart	Asst. Sec., Int. Dept., Washington, D. C., 20240.	1975
EPPLEY, Zoe	1969 Loring St., San Diego, CA, 92109.	1977
FETTEROLF, Peter M. Jr.	Dept. Zool., Ramsay Wright Zool. Labs, Univ. Toronto, Toronto, Ont., Canada.	1975
FISCUS, Clifford H.	Natl. Mar. Fish. Serv., Mar. Mammal Div., Nav. Sup. Act. Bldg. 192, Seattle, WA, 98115.	1977
FITZNER, Richard E.	Ecosystems Dept., 6652 I Bldg, 600 Area, Batelle Northwest Labs, Richland, MA, 99352.	1975
FLOCK, Warren L.	Univ. Colo., Dept. Elec. Engr. Boulder, CO, 80309.	1976
FORSEL, Douglas J.	298 Drexel Ave., Ventura, CA, 93003.	1977
FRAZER, David A.	49 West Cramona, Seattle, WA, 98119.	1976
FREEL, Maeton	6412 Crescent Ave., No. 12, Buena Park, CA, 90620.	1976
FRICKIE, Donald W.	POB 346, Bethel, AK, 99559.	1976
FRINGS, Hubert	Dept. Zool., Univ.Oklahoma, Norman, OK, 79369.	1977
FRIEDRICHSEN, Gary L.	POB 890, Arcata, CA, 95521.	1976
FROKE, Jeff	Wildl. Mgt. Dept., Humboldt State Univ., Arcata, CA, 95521.	1976
GARRETT, Ronald	1543 Patrick's Pt. Dr., Trinidad, CA, 95570.	1978
GERSTENBERG, Ron	Reedley College, Reedley, CA, 93654.	1977
GILSTON, H.	Ch. des Mouettes 16, 1007 Lausanne, Lausanne, SWITZERLAND	1977

GILL, Robert Jr.	USF&WS, 800 A St., Ste. 110, Anchorage, AK, 99501.	1977
GNAGY, Joseph	2326 E. Girard Pl., Spokane, WA, 99203.	1977
GOULD, Patrick	USF&WS, OBS, 800 A St., Ste. 110, Anchorage, AK, 99501.	1980
GRANT, Gilbert	Dept. Biol., Univ. Calif., Los Angeles, CA, 90024.	1977
GRAU, C. R.	Dept. Avian Sci., Univ. Calif., Davis, CA, 95616.	1976
GRESS, Franklin	POB 247, Bodega Bay, CA, 94923.	1976
GROVES, Sarah	Dept. Zool., Univ. British Col., Vancouver, B.C., Canada V6T 1W5.	1977
GRUBB, Thomas	Rt. 3, Box 91A, Marengo, OH, 43334.	1975
GUZMAN, Juan	1012 Varley Dr. NW, Calgary, ALTA, Canada T3B 2V5.	1977
HALVORSEN, Sigurd	N-4260, Torvastad, NORWAY.	1977
HAND, Judith Latta	Dept. Biol., Univ. Calif. Los Angeles, CA, 90024.	1975
HANDEL, Colleen	POB 163, Kasilof, AK, 99610.	1977
HARDWICK, James	Calif. Dept. Fish & Game, 2201 Garden Road, Monterey, CA, 93940.	1977
HARPER, Charles A.	POB 3965, San Francisco, CA, 94119.	1977
HARPER, Peter C.	43 Rimu Rd., Raumati Beach, NEW ZEALAND.	1975
HARRINGTON, Brian	POB 0, Manomet, MA, 02345.	1976
HARRIS, M. P.	Institute Terrestrial Ecol., Banchory Res. Sta., Hill of Brathens, Glassel Banchory, Kincardineshire AB3 4BY, UNITED KINGDOM.	1975
HARRIS, Stan	Dept Wildl., Humboldt State Univ., Arcata, CA, 95521.	1978
HARRISON, Craig	USFWS, OCS, OBS, 800 A St., Suite 110, Anchorage, AK, 99501.	1976
HARRISON, Ed. N.	West. Found. Vert. Zool., 1100 Glendon Ave., Los Angeles, CA, 90024.	1976
HARVEY, Thomas E.	2923 Marina Dr., Alameda, CA, 94501.	1976
HASEGAWA, Hiroshi	Dept. Zool., Faculty of Sci., Kyoto Univ., Sakyo-ku, Kyoto 606, JAPAN.	1977
HATLER, David	POB 3250, Smithers, BC, Canada VOJ 2NO.	1976
HEINEMAN, Dennis	Dept. Zool., Ore. State Univ., Corvallis, OR, 97331.	1976
HICKEY, Joseph J.	Dept. Wildl. Ecol., Univ. Wisc., Madison, WI, 53706.	1976
HIGUCHI, Yukio	Town Office, Kiinagashima Machi, Mie, JAPAN 5A-32.	1977
HIRSCH, Katherine	208 Cecil St., Minneapolis, MINN, 55414.	1977
HOBERG, Eric	Dept. Vet. Microbio., Univ. Sask., Canada, Saskatoon, Sask., S7N, OWO.	1978

HOBERG, Max	IMS, Univ. Alaska, Fairbanks, AK, 99701.	1978
HOFFMAN, Wayne	Dept. Zool., Ore. State Univ., Corvallis, OR, 97331.	1977
HORN, Michael H.	Dept. Bio., Calif. State Univ., Fullerton, CA, 92634.	1975
HOUT, Jerry L.	POB 346, Bethel, AK, 99559.	1976
HOWARD, Paul M. Jr.	555 Audubon Pl., Sacramento, CA, 95825.	1976
HOWE, John G.	1822 Apple Ln., Davis, CA, 95616.	1977
HOWELL, Thomas R.	Dept. Bio., Univ. Calif., Los Angeles, CA, 90024.	1976
HUBBARD, Joel	120 So. 35th St., Boulder, CO, 80303.	1977
HUBER, Harriet	Pt. Reyes Bird Obs., Bolinas, CA, 94924.	1976
HUNT, George	Dept. Ecol. & Evol. Bio., Univ. Calif., Irvine, CA, 92717.	1977
HYATT, Herb	BLM, Pacific OCS Off., Rm. 7127, 300 N. Los Angeles St., Los Angeles, CA, 90012.	1976
ISLEIB, Pete	POB 139, Cordova, AK, 99574.	1978
JACOBSEN, Michael J.	POB 1287, Juneau, AK, 99803.	1978
JAMES, Paul C.	2342 Caledonia Ave., North Vancouver, BC, Canada.	1978
JEHL, Joseph R. Jr.	POB 1390, San Diego, CA, 92112.	1976
JENSEN, Jørn Vestergaard	Holtevej 13, DK-8000 Aarhus C, DENMARK.	1977
JOHNSON, Oscar W.	Dept. Bio., Moorhead State Coll., Moorhead, MN, 56560.	1977
JOHNSON, Stephen R.	10110 124th St., Edmondton, ALTA, T5N 1P6.	1978
JOLLY, Jon B.	10119 51st SW, Seattle, WA, 98146.	1977
JONES, Lee	Univ. Calif., Sch. Med., Dept. Physiol., Los Angeles, CA, 90024.	1977
JONKEL, George M.	USF&WS, Mig. Bird Mgmt., Laurel, Md., 20811.	1977
JUDGE, Debra S.	Div. Wildl. & Fish. Biol., Univ. Calif., Davis, CA, 95616.	1977
KAISER, Gary W.	POB 125, Delta B.C., Canada V4K 3N6.	1977
KATZ, Sue	910 F St., Davis, CA, 95616.	1977
KAWASHIMA, Sigeuki	24-1 3-chome Nakaochiai, Shinguku-ku, Tokyo, JAPAN.	1977
KEITH, James O.	1771 S. Welch Circle, Lakewood, CO, 80228.	1977
KESSEL, Brina	POB 80211, College Station, Fairbanks, AK, 99708.	1977
KIFF, Lloyd	West. Found. Vert. Zool., 1100 Glendon Ave., Los Angeles, CA, 90024.	1976

KING, James G.	POB 1287, Juneau, AK, 99801.	1977
KING, Kirke A.	POB 2506, Victoria, TX, 77901.	1977
KING, Rodney J.	POB 52, Cordova, AK, 99574.	1977
KING, Warren B.	871 Dolley Madison Blvd., McLean, VA, 22101.	1975
KIRKPATRICK, Ralph D.	7552 S. 350 E. Osage Farm, Jonesboro, IN, 46938.	1977
KLUDT, Larry R.	POB 184, San Martin, CA, 95046.	1977
KNODER, C. Eugene	West. Environ. Sci. Prog., Nat. Audubon Soc., 9250 W. 5th Ave., Lakewood, CO, 80226.	1976
KOOYMAN, Gerald L.	12998 Via Grimaldi, Del Mar, CA, 92014.	1976
KRASNOW, Lynne D.	1375 Orange Ave., San Carlos, CA, 94070.	1976
LANDIN, Mary Collins	POB 631, Vicksburg, MISS, 39180.	1977
LARSON, James W.	Nat. Park Ser., 540 W. 5th Ave., Anchorage, AK, 99501.	1977
LARSON, Robert C.	3356 Dale St., Ketchikan, AK, 99901.	1975
LEACH, Howard	Calif. Fish & Game Dept., 1416 Ninth St., Sacramento, CA, 95814.	1979
LEDDY, Mathew	116 Cuesta Dr., S San Francisco, CA, 94080.	1977
LENT, Peter	USFWS, c/o UCS Prog. Off.Rx4, NOAA Environ. Res. Lab., Boulder, CO, 80302.	1976
LESCHNER, Lora	11525 32 Ave. NE, Seattle, WA, 98125.	1977
LeVALLEY, Ron	Pt. Reyes Bird Obs., 4990 State, Rte. 1, Stinson Beach, CA, 94970.	1977
LEVEQUE, Raymond	Station ornithologique suisse, CH-6204 SEMPACH, SWITZERLAND.	1979
LIBRARY of Congress	Exchange & Gift Div. (IO), Washington, D.C., 20540.	1977
LIBRARY	Edward Grey Inst. Fld. Ornith., South Parks Road, Oxford, ENGLAND, OX1 3PS	1977
LIBRARY	Patuxent Wildlife Res. Ctr., USDI, Laurel, MD, 20811, ATTN: Lynda Garrett, Librarian	1977
LIBRARY	Dept. Wildl. & Fish., Univ. Alaska, Fairbanks, AK, 99701.	1977
LIBRARY	Wildl. Res. Ctr., USF&WS, Fed. Ctr. Bldg. 16, Denver, CO, 80225.	1977
LOS ANGELES Public Library,	Serials Sci-Tech, 630 West 5th, Los Angeles, CA, 90071.	1977
LOWE, Roy III	1507 Oakleaf Ave., Healdsburg, CA, 95448.	1977
MAJOR, Peter	Dept. Biol. Sci., Simon Frazer Univ., Burnaby, BC, V5A 156.	1976

MAKISHIMA, Eugene	40117 Santa Teresa Common, Fremont, CA, 94538.	1977
MANION, Bruce	Univ. Ill. Med. Ctr., Dept. Anatomy, POB 6990, Chicago, IL, 60680.	1976
MANUWAL, David A.	Wildl. Sci. Grp., College Forest Resources AR10, Univ. Washington, Seattle, WA, 98195.	1977
MARSHALL, Mac	Dept. Anthro., Univ. Iowa, Iowa City, IA, 52242.	1975
MATTHIESEN, Diana G.	Dept. Biol. Sci., San Jose State Univ., San Jose, CA, 95192.	1975
MATTOCKS, Philip W. Jr.	10109 NE 24th, Bellvue, WA, 98004.	1977
McCASKIE, Guy	1310 14th St., Imperial Beach, CA, 92032.	1976
McCORMICK, Kevin J.	Nat. Parks & Wildl. Office., Jelan Kertak, Kuching, Sarawak, E. MALAYSIA.	1976
McCRIMMON, Donald A.	Cornell Lab Ornithology, 159 Sapsucker Woods Rd., Ithaca, NY, 14853.	1977
McDONALD, Malcolm E.	US Nat. Fish & Wildl. Serv., Health Lab, Univ Wisc., Vet. Sci., Madison, WI, 53706.	1976
McGILL UNIV.	MacDonald Coll., Library, McGill Univ., Montreal, Quebec, Canada, H3C 3G1.	1977
McHUGH, Kenneth	c/o Peace Corps, POB 158, Koror, Palau, WEST. CAROLINE ISLAND, 96940.	1975
McMILLAN, Hugh	Salisbury, CONN 06068.	1975
MELVILLE, David	Agr. & Fish. Dept., 393 Canton Rd., Kowloon, HONG KONG.	1977
MESLOW, E. C.	Ore. Coop. Wildl. Res. Unit, Ore. State Univ., Corvallis, OR, 97331.	1975
MacINTOSH, Richard	POB 1561, Kodiak, AK, 99615.	1977
MEWALDT, Richard	Avian Biol. Lab., San Jose State Univ., San Jose, CA, 95192.	1975
MICKELSON, Peter	Dept. Wildl. & Fish., Univ. Alaska, Fairbanks, AK, 99701.	1977
MILLER, Gregg	2168 Emerson St., Berkeley, CA, 94705.	1977
MOBERG, Eric	2521 Carson St., Redwood City, CA, 94061.	1977
MOE, Allen	Ambler, AK.	1976
MONTGOMERY, Donald	Rt. 5, Box 5658, Juneau, AK, 99803.	1976
MOREHOUSE, Keith A.	Joint State/Fed. Fish & Wildl. Advisory Team, 628 F St., Anchorage, AK, 99501.	1975
MOREJOHN, Victor	POB 223, Moss Landing, CA, 75039.	1976

MORTENSEN, Erik	Klokkaragota 24, 3800 Torshavn, Faroe Island via DENMARK.	1977
MYRES, M. T.	Dept Biol., Univ. Calgary, Calgary, ALTA, Canada, T2N 1N4.	1977
NELSON, Harvey	2431 Riviera Dr., Vienna, VA, 22180.	1975
NELSON, Jay	POB 1916, Sitka, AK, 99835.	1977
NELSON, R. Wayne	Dept. Biol., Univ. Calgary, Calgary, ALTA, Canada, T2N 1N4.	1976
NETTLESHIP, D. N.	Canadian Wildl. Serv., Mar. Ecol. Lab., Bedford Inst. Ocean., Dartmouth, Nova Scotia, Canada, B2Y 4A2.	1976
NORTON, David W.	NOAA-OCSEP Arctic Proj. Off., Geophys. Inst., Univ. Alaska, Fairbanks, AK, 99701.	1975
NYSEWANDER, David R.	USF&WS, 800 A St., Anchorage, AK, 99501.	1977
OAKLEY, Karen	S.R. Box 20195, 2-mile Goldstream Rd., Fairbanks, AK, 99701.	1976
OHLENDORF, Harry	Patuxent Wildl. Res. Ctr., Laurel, MD, 20811.	1978
OLSEN, Bergun	Kagsakollegiet 161, 2730 Herlev, DENMARK.	1977
OSBORNE, Timothy	1510 W. Carriage Dr.,Santa Ana, CA, 92704.	1977
PAGE, Gary	c/o PRBO, 4990 State Rt. 1, Stinson Beach, CA, 94970.	1977
PARCELLS, Steve	4137 24th St., Apt. 4, San Francisco, CA.	1977
PATLA, Susan M.	7415 Olivetas St., La Jolla, CA, 92037.	1977
PATTEN, Samuel M. Jr.	Dept. Pathobio., John Hopkins Univ., 615 No. Wolfe St., Baltimore, MD, 21205.	1975
PAULIK, Edgar	762 Heather St., Richmond, BC, Canada, V64 2P9.	1976
PAYNE, Elaine	726 E. Laguna Ave., Santa Maria, CA, 93454.	1976
PEARCY, William G.	Sch. Oceanography, Ore State Univ., Corvallis, OR, 77331.	1976
PERCY FITZPATRICK	Inst. African Ornith., Univ. of Cape Town, Rondebosch, CPS AFRICA.	1977
PETERSEN, Aevar	Edward Grey Inst. Ornith., Dept. Zool., South Parks Rd., Oxford, ENGLAND OX1 3PS.	1977
PETERSON, Margaret R.	POB 250, Suisun, CA, 94585.	1976
PEYTON, Leonard	Inst. Arctic Biol., Univ. Alaska, Fairbanks, AK, 99701.	
PHILLIPS, Mark	2092 Palomino Ln., Arcata, CA, 95521.	1977
PIEROTTI, Raymond	370 26th Ave., Santa Cruz, CA, 95062.	1976

PITELKA, Frank A.	Mus. Vert. Zool., Univ. Calif., Berkeley, CA, 94720.	1976
PITMAN, R. L.	8720 Harness St., Spring Valley, CA, 92077.	1976
PORTNOY, John W.	515 Gardere Ln., Baton Rouge, LA, 70808.	1976
POUGH, Edward W.	POB 286, Lewes, Delaware, 19958.	1975
POUGH, Richard H.	33 Highbrook Ave., Pelham, NY, 10803.	1977
POWERS, Kevin	7 Jones St., Worcester, MASS, 01604.	1976
PYLE, Robert L.	741 N. Kalaheo Ave., Kailua, HI, 96734.	1975
QUAMMEN, Mellicent	Dept. Biol. Sci., Univ. Calif., Santa Barbara, CA.	1977
QUAST, Jay	Rt. 5, Box 5694, Juneau, Alaska, 99801.	1977
RAMSEY, Fred L.	2504 NW Mulkey, Corvallis, OR, 97330.	1976
REARDEN, Jim	Outdoors Ed., Alaska Mag., POB 313, Homer, AK, 99603.	1976
RICE, Robin C.	Dept Entom., Univ. Hawaii, Honolulu, HI, 96822.	1975
RICKLEFS, Robert	Dept. Biol., Univ. Penn., Philadelphia, PA, 19174.	1977
RIECK, Carroll	State of Wash., Dept. Game, 600 No. Capitol Wy., Olympia, WA, 98504.	1976
RIEGER, John P.	4123½ Wilson Ave., San Diego, CA, 92104.	1977
RISEBROUGH, Robert W.	Bodega Mar. Lab., POB 247, Bodega Bay, CA, 94923.	1977
ROBBINS, Chandler S.	US Fish & Wildl. Ser., Migratory Bird & Habitat Res. Lab., Laurel MD, 20811.	1975
ROBERTSON, Ian	6267 Thorne Rd., Burnaby, BC, Canada, V3N 2V2.	1976
ROBERTSON, William	Everglades Nat. Park., Homestead, FL, 33030.	1976
ROCKWOOD, Stephen	M/V Tustemena, POB 66, Seward, AK, 99664.	1976
ROE, William G.	2318 E. Elm St., Tucson, ARIZ, 85719.	1977
ROUDYBUSH, Tom	2950 Portage Bay #223, Davis, CA, 95616.	1978
RUOS, James L.	7145 Deer Valley, Highland, MD, 20777.	1977
RYDER, Oliver A.	Dept. Reproductive Med., C-015, Univ. Calif. San Diego, La Jolla, CA, 92037.	1976
RYDER, Ronald A.	Dept. Fish. & Wildl. Biol., Colo. State Univ., Fort Collins, CO, 80523.	1976

SANGER, Gerald A.	US Fish & Wildl. Serv., Off. Bird Serv., 800 A St., Anchorage, AK, 99501.	1976
SANTA BARBARA MUS. NAT. HIST.,	2559 Puesta Del Sol Rd., Santa Barbara, CA, 93105.	1976
SAUNDERS, David	Sunnyhill, Rosemarket, Milford Haven, Pembrokeshire, Wales, GREAT BRITAIN.	1976
SCHAMEL, Douglas	U of A Wildl. Mgt., Univ. Alaska, Fairbanks, AK, 99701.	1976
SCHLATTER, Roberto	Instituto de Zoologia, Universidad Austral de Chile, Casilla 567, Valdivia, CHILE.	1976
SCHOUTEN, Madelon	14916 Thrift Ave., White Rock, BC, Canada, V4B 2J9.	1977
SCHREIBER, Ralph W.	Ornith., Nat. Hist. Mus., 900 Exposition Blvd., Los Angeles, CA, 90007.	1976
SCHWARTZ, Doug	13402 Eton Pl., Santa Ana, CA, 92705.	1977
SCOTT, Joan	AFCED/EV, Tyndall AFB, FL, 32401.	1976
SCOTT, Michael	POB 44, Hawaii Nat. Park, HI, 96718.	1977
SEALY, Spencer G.	Univ Manitoba, Winnipeg, Manitoba, Canada.	1976
SEARING, Gary	LGL Lt'd., 10110 124th St., Edmonton, ALTA, Canada.	1976
SEDGEWICK, G. E.	5 Benita Way, Martinez, CA, 94553.	1976
SEKORA, Palmer C.	337 Uluniu St., Kailua, HI, 96734.	1976
SENNER, Stan	Wildl. Res. Unit, Univ. Alaska, Fairbanks, AK, 99701.	1977
SERIALS DEPT.	McGill Univ. Libraries, 3459 McTavish St., Montreal, Quebec, Canada, H3A 1Y1.	1977
SERIALS SECTION	The Libraries, Colo. State Univ., Fort Collins, CO, 80521.	1977
SCHALLENBERGER, Robert J.	Ahuimanu Productions, POB 1166, Kailua, Oahu, HI, 96734.	1975
SMITH, David C.	c/o Bird Rescue Ctr., Aquatic Park, Berkeley, CA, 94710.	1977
SMITH, Susan M.	Depto. de Biologia, Universidad de Costa Rica, Cuidad Universitaria, COSTA RICA.	1976
SOWL, L. W.	5107 Southampton Dr., Annandale, VA, 22003.	1977
SOWLS, Arthur L.	c/o USF&WS-OBS, 800 A St., Suite 110, Anchorage AK, 99501.	1977
SPEICH, Steven	1250 West Philadelphia Ave., Ontario, CA, 91761.	1977
SPRINGER Paul F.	Migratory Bird Res. Sta., USF&WS, c/o Humboldt State Univ., Arcata, CA, 95521.	1976

SPROUL, John Jr.	8413 Buckingham Dr., El Cerrito, CA, 94530.	1976
SPRUNT, Alexander IV	115 Indian Mound Trail, Tavernier, FL, 33070.	1976
STALLCUP, Richard	7481 Woodrow Dr., Oakland, CA, 94611.	1977
STENZEL, Lynne	4990 State Rt. 1, Stinson Beach, CA, 94970.	1977
STEWART, Robert	PRBO, 4990 Shoreline Hwy., Stinson Beach, CA, 94970.	1977
ST. LOUIS, Martin	4848 Angelus, Arcata, CA, 95521.	1977
STRANG, Carl A.	Dept. Biol. Dickinson College, Carlisle, PA, 17013.	1977
STRONG, Helen	Box 8, Alder Rd., Bolinas, CA, 94924.	1977
SWEET, Nathan C. Jr.	POB 1388, Cambria, CA, 93428.	1976
TAYLOR, Lawrence J.	4679 William St., Omaha, NB, 68106.	1976
THOMPSON, Max C.	Southwestern College, Winfield, KS, 67156.	1976
THOMAS, Dana	825 NW 23rd, Riveria Apts. #51, Corvallis, OR, 97331.	1977
THORESEN, Asa C.	Box 147 Andrews, Berrien Springs, MI, 49104.	1976
THRELFALL, William	Dept. Biol., Memorial Univ., St. John's NFLD, Canada, A1C 5S7.	1976
TODD, Frank S.	Sea World, 1700 So. Sho es Rd., San Diego, CA, 92109.	1976
TRAPP, John L.	Aleutian Islands NWR, POB 5251, Adak, AK, 99695.	1977
TULL, Eric	10110 124th St., Edmonton, ALTA, Canada, T5N 1P6.	1977
TWEIT, William H.	Rt. 3, Box 944, Olympia, WA, 98506.	1976
UC-DOCUMENTS DEPT.	Serials Dept., Gen. Libr., Univ. Calif., Berkeley, CA, 94720.	1977
UC-DOCUMENTS DEPT.	Serials Dept., Gen. Libr., Univ. Calif., Davis, CA, 95616.	1977
UDVARDY, M. D. F.	Dept. Biol. Sci., Calif. State Univ., Sacramento, CA, 95819.	1977
VAN CLEVE, G. Bernard	304 So. Winebiddle St., Pittsburgh, PA, 15224.	1977
VAROUJEAN, Daniel	Dept. Wildl. & Fish. Bio., Univ. Calif., Davis, CA, 95616.	1977
VASSALLO, Marilyn	215 Walnut St., Pacific Grove, CA, 93950.	1977
VERMEER, Kees	8968 Mainwaring Rd., Sidney, Vancouver Island, British Columbia, Canada, V8L 1J7.	1977
VILLA-RAMIREZ, Bernardo	Privada de San Lucas No. 9, Coyoacan, Mexico 21, D. F., Mex.	1976
VOLLERTSEN, John T.	Dept. Biol., Univ. New Mex., Albuquerque, NM, 87131.	1977

WAHL, Terrence R.	3041 Eldridge, Bellingham, WA, 98225.	1977
WALTERS, Michael P.	Sub-Dept. Ornith., British Mus. Nat. Hist., Tring Mus., Tring, Hertfordshire, ENGLAND.	1975
WALTON, Brian J.	CRBI, POB 2565, Santa Clara, CA, 95053.	1976
WARD, John G.	10110 - 124th St., Edmonton, ALTA, Canada.	1977
WARHAM, John	Zool. Dept., Univ Canterbury, Utristchurch, NEW ZEALAND.	1976
WARTER, Stewart	Dept. Biol., LBS, Long Beach State Univ., Long Beach, CA, 90840.	1976
WATSON, Jay F.	9325 SW Parkview Loop, Beaverton, OR, 97005.	1977
WATSON, Louisa	4323 Cathedral Ave. NW, Washington, D.C., 20016.	1978
WEBB, Morgan C.	Dept. Biol., Morningside College, Sioux City, IA, 51106.	1975
WEHLE, Duff	202 Bunnell, Univ. Alaska, Fairbanks, AK, 99701.	1977
WESTON, Henry G. Jr.	Dept. Biol., San Jose State Univ., San Jose, CA, 95192.	1977
WHITE, Clayton	Dept. Zool., Brigham Young Univ., Provo, Utah, 84601.	1978
WIENS, John A.	Dept. Zool., Oregon State Univ., Corvallis, OR, 97331.	1977
WILBUR, Sanford R.	405 Park Rd., Ojai, CA, 93023.	1975
WILSON, Graham	Biol. Dept., Memorial Univ. St. Johns, Newfoundland, Canada.	1977
WOHL, Kent	POB 1159, Anchorage, AK, 99510.	1976
WOLK, Robert G.	Nassau Co. Mus., Seaford, NY, 11783.	1975
WOODLEY, Robert E.	1935 Hetrick Ave., Richland, WA, 99352.	1975
WOODWARD BIOMEDICAL LIBR.	Serials Div., Univ. British Columbia, 2075 Wesbrook Pl., Vancouver, BC, Canada, V6T 1W5.	1977
WOOLINGTON, Dennis W.	Wildl. Res. Fld. Station, Humboldt State Univ., Arcata, CA, 95521.	1975
YESNER, David R.	Univ. Alaska, 2533 Providence Ave., Anchorage, AK, 99504.	1976
YOCUM, Charles	Dept. Wildl., Humboldt State Univ., Arcata, CA, 95521.	1977
ZEILLEMAKER, C. Fred	USFWS, Hawaiian Is. NWR, POB 87, Kilauea, HI, 96754.	1977

IV. Items of Interest.

INTERNATIONAL CONFERENCE, THE CHANGING SEA-BIRD POPULATIONS OF THE NORTH ATLANTIC--An international conference, sponsored by the BOU, BTO, RSBP, British Seabird Group, Scottish Ornithologists' Club, and Wildfowl Trust was scheduled for 26-28 March 1977 at Aberdeen University, Scotland, to enable the many workers on sea-birds in Europe and on the eastern seaboard of North America to meet and find out about each other's research. Members of the sponsoring societies, and others interested in the subject, were encouraged to attend.

Morning sessions were devoted to in depth topics and afternoons to invited and offered papers on current research. Morning topics were as follows:

Saturday:	POPULATION ECOLOGY Auks and gulls were selected as the two groups to be covered.
Sunday:	HUMAN INFLUENCES Fisheries, oil development, and chemical pollution.
Monday:	SURVEYS Birds at sea and the use of aerial techniques.

Correspondence about the program should be sent to Chris Mead, British Trust for Ornithology, Beech Grove, Tring, Herts. HP23 5NR, who is secretary of the organizing committee (Professor George Dunnet, Dr. Christopher Perrins, and Clare Lloyd).

COLONIAL WATERBIRD GROUP--A Colonial Waterbird Group (CWG) was formed at the North American Wading Bird Conference on 16 October 1976. The group combines the North American Wading Bird Group and the Seabird Group from eastern North America. Preliminary objectives of the CWG are: 1) to encourage and coordinate standardized surveys of colonial waterbirds, 2) to assist efforts by conservationists related to protection and management of wetland and coastal ecosystems, and 3) to act as a clearinghouse of information for on-going research and research opportunities. The group has established a newsletter as a channel of communication among the CWG members and plans a meeting late in 1977.

Chairperson of the pro tempore Steering Committee for CWG is John C. Ogden, editor of the Newsletter is Mitchell A. Byrd, and Secretary-Treasurer is Joanna Burger. All those interested in joining are urged to contact Joanna Burger, Department of Biology, Livingston College, Rutgers University, New Brunswick, New Jersey 08903. Dues for 1977 are $5.00.

COLONY CATALOGUE, ALASKA--OBS-CE is engaged in a project of cataloging seabird colonies along the coastline of Alaska, a distance of over 34,000 miles, most remote and seldom visited. The cataloging effort was begun about seven years ago by FWS employees Jim Bartonek, LeRoy Sowl, George Divoky, Palmer Sekora, Ed Bailey, Vern Byrd, Larry Haddock, Jim King, and Dan Gibson; but it received a revitalizing boost with OCS funds from BLM through a NOAA-contracted study.

The catalog is an open file of information on each of thousands of colonies within the state. Colony records, maps, and photographs are kept at our office and are available for use to anyone. Certain basic information about each colony is being computerized to assist in analyses of oil spill risks, relationships between pelagic distribution and breeding sites, identification of critical habitats, and assessing changes in population status from whatever cause, and dispensing information.

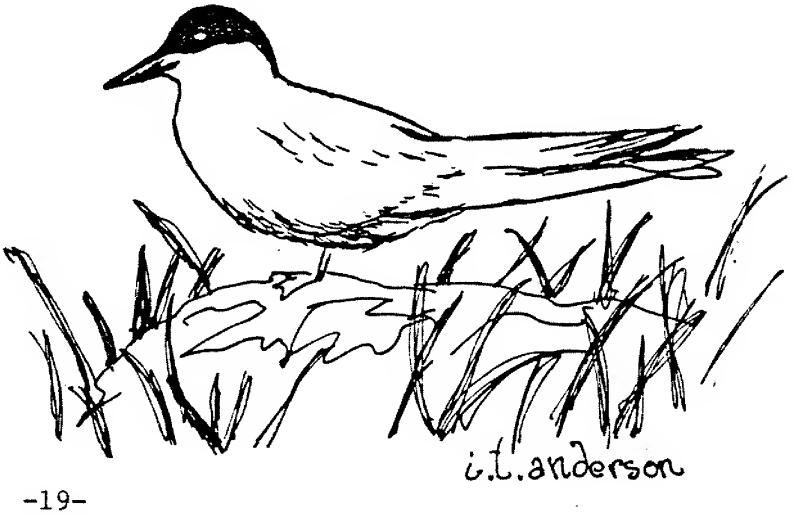
A preliminary catalog of the colonies should be published by the end of 1977 and made available for distribution. We recognize that the data in this catalog will vary in quality and precision of estimates, but nonetheless it will provide the base from which information can be added, upgraded, or corrected. Anyone wishing more information or having comments or data to contribute is encouraged to write or stop by our office at any time. Forms and instructions used in this catalog are available upon request. Remember that a preliminary catalog will be published by the end of this year, and your data are needed. All data will be properly credited.

Arthur L. Sowls
U.S. Fish and Wildlife Service
Office of Biological Services -
Coastal Ecosystems
800 A Street - Suite 110
Anchorage, Alaska 99501
November 1976

V. Bulletin Board.

SPECIMENS WANTED--The Natural History Museum of Los Angeles County, Section of Ornithology, will act as repository for any and all dead birds. We are particularly interested in birds which can be sexed, either through examination of the gonads or plumage characteristics, and desire to build up the skeleton and alcoholic collections through aquisition of birds found dead and in a reasonably fresh condition. We are particulary interested in marine birds but will accept any and all wild birds, and certain captives. We suggest freezing the specimens and encourage you to label the specimen with date and place and wrapping it in clear plastic bag which is tightly closed. Call us when you need to ship the specimens to Los Angeles.

Ralph W. Schreiber
Los Angeles County Museum
900 Exposition Blvd.
Los Angeles, Calif. 90007
AC 213, 746-0410
October 1976



SEABIRD PHOTOS WANTED--For my forthcoming field guide of the western birds I still need a few color slides of less often photographed species. The publishers, Chanticleer Press of New York pay $75 for single use of one 35 mm (2by2") color slide. Following are needed:

All North Pacific Shearwaters	Aleutian Tern
Laysan Albatross	Cassin's Auklet
Leach's Storm-petrel	Kittlitz Murrelet
Black Storm-petrel	Marbled M. (summer plumage)
Pacific Eider (drake)	Xantus' Murrelet
Black Turnstone (1 or more, flying)	Craveri's Murrelet
Ross' Gull	Paraqueet Auklet

Please contact by letter, giving your phone number.

Miklos D. F. Udvardy
Dept. Biol. Sciences
Calif. State University
Sacramento, CA 95819
December 1976

BANDING AND COLOR-MARKING GULLS IN ALASKA--One of the major projects of Sam and Renee Patten has been the color-marking and banding of gulls in the Cordova area. They are concluding their second year on a study of breeding ecology of the Gulf of Alaska Herring Gull group (Larus argentatus x Larus glaucescens). The purpose of this research has been to investigate the reproductive success of this gull group prior to the development of oil resources, obtain some idea of the diseases resident in this bird population, study migration routes, ascertain the evolutionary status, and examine the potential of these gulls to serve as an indicator species for environmental decline.

Thirty adult gulls have been dyed yellow and wear conspicious leg bands. On one leg the gulls have a large aluminum band (with yellow tape in 1976), and on the other leg is a large orange plastic band with the codes C00 to C99 in black letters. Seventy-five juvenile gulls from the Egg Island study area also wear bands with this combination. The juvenile gulls are otherwise unmarked. The Pattens have banded some 4500 other gulls during the course of this NOAA project.

Anyone seeing yellow adult gulls or recovering gull bands please notify them c/o Forest Service, P.O. Box 280, Cordova, AK 99574.

Sam Patten
Dept. Pathobiology
John Hopkins Univ.
615 N. Wolfe Street
Baltimore, MD 21205
December 1976

II. British Columbia.

ITEMS OF INTEREST--

(1) The regional representative of British Columbmia has recent communication with Dr. N. Litvinenko from Vladivostok. According to Dr. Litvinenko there are only five Russian ornithologists seriously engaged in seabird work in the Pacific Region. They are:

E. A. Mihtarjyants, who investigates the breeding biology of the Alcidae at the Komandor Islands.

Ju. V. Shibaev, who is interested in the breeding biology of Alcidae of South Primorye and the distribution of seabirds in Primorye and Khabarovsk Region.

A. G. Velizhanin works on seabirds from the Kuril Islands and problems of origin of the insular fauna.

L. V. Phirsova, an ornithologist from Leningrad who collects information on gulls at the Komandor Islands.

M. Litvinenko is interested in the breeding biology, food habits and migration of seabirds in the Peter the Great Bay. There are seabird colonies of Larus crassirostris, Cepphus carbo, Uria aalge, Synthliboramphus antiquus, Cerorhinca monocerata, Oceanodroma monorhis, Puffinus leucomelas, Phalacrocorax filamentosus and P. pelagicus in Peter the Great Bay.

(2) A limited number of bibliographies on the effects of oil pollution on birds and aquatic organisms have recently been reprinted. Copies can be obtained from Kees Vermeer.

The bibliographies are:

R. Vermeer and K. Vermeer. 1974. Oil pollution of birds: an abstracted bibliography. Canadian Wildlife Service. Pesticide Section. Manuscript report 29:1-68.

R. Vermeer and K. Vermeer. 1974. The biological effects of oil pollution on aquatic organisms: A summarized bibliography. Canadian Wildlife Service. Pesticide Section. Manuscript Report 31:1-67.

Kees Vermeer
Regional Representative
British Columbia

MARINE BIRD INTEREST IN AUSTRALIA--I am a member of the Australasian Seabird Group, living 100 metres from the shores of the South Pacific in South East Queensland. We came here to retire from the U.K. some 3 years ago and are very active in promoting interest in local ornithology as I have been involved in amateur ornithological field work in the U.K., Europe and on world trips for nearly 40 years. I have made special studies of sea birds and would like to exchange news and views with any of your members who have the time and the inclination to do so--bird movements, local publications, etc. I have detailed notes of sea bird movements off the coast locally--we get very large flocks up to 350,000 of the Short Tailed Shearwater in Nov. and Dec. Also several thousand Fluttering Shearwaters in addition to the usual influx each summer of the waders from Siberia and Mongolia.

Maurice Glasman
14 Ocean Sound
Broadbeach Q4217
Queensland, Australia
December 1976

REGIONAL REPORTS

I. Alaska.

The summer of 1976 saw the largest seabird research effort in the history of Alaska. Work was conducted on Forrester Island in extreme southeast Alaska, on the westernmost Aleutian Islands and on the Arctic coast as far east as the border with Canada. Few areas in between these points were missed as ship, boat and aerial censusing as well as site specific work were carried out by a number of investigators. Most of the field research was funded by the Outer Continental Shelf Energy Assessment Program. The preceding issue of the Bulletin contains a listing of the various projects and investigators.

Reports from the field of large scale failure at many breeding colonies and normal to good production at other colonies prompted the OCS program to hold a meeting of all investigators in order to see how differences in nesting success and chronology might be explained. Weather and ice investigators presented information that might explain some of the bird phenomena. A summary of the major findings of the meeting will be included in the next PSG Bulletin.

George J. Divoky
Regional Representative
Alaska

IV. Oregon.

Apparently there is no active seabird research being conducted on the Oregon coast this year. The Bureau of Sport Fisheries and Wildlife (Oregon Islands Refuge management) conducted their annual aerial survey of the offshore breeding colonies in June. The Corvallis Audubon Society made one pelagic birding trip in August. A group of people from the OSU Marine Science Center and the Oregon Fish Commission Laboratory, Newport Oregon are conducting monthly censuses of the Yaquina Bay Estuary.

ITEMS OF INTEREST--Oregon is presently involved in a major political battle over land use planning. A group of citizens asking for "local control" are attempting to repeal the state's Land Use Planning Laws. If this move is successful, the result will be to return all zoning authority to local governments. On the Oregon coast the likely result is a free hand for the Developers, at least until the state legislature can come up with some other means of frustrating them.

V. Northern California.

No significant developments in the area to report. Offshore oil studies will hopefully be funded in 1977, and a major research thrust should begin soon. Hopefully, future developments will warrant a report in the next issue.

David G. Ainley
Regional Representative
Northern California

VI. Southern California.

CURRENT RESEARCH--University of California, Irvine (Department of Ecology and Evolutionary Biology, Irvine, California)

(1) A major project is the Bureau of Land Management sponsored baseline study of marine seabirds utilizing the Southern California Bight area. Studies include breeding biology of nesting birds, distribution and seasonality of non-breeders, foraging areas and foods of all species. These studies are designed to identify areas that would be particularly sensitive to oil resource development off southern California.

Breeding species being studied closely are Western Gull, Cassin's Auklet and Xantus' Murrelet. Also investigated, though less intensely, are Brandt's, Double-crested and Pelagic Cormorant, Pigeon Guillemot, Ashy, Leach's, and Black Storm-Petrels. The latter being recorded as a breeder in the United States for the first time this year. Principal investigator: George L. Hunt, Jr., with Ken Briggs and David Lewis (University of California, Santa Cruz) and Steve Speich and Robert Pitman at University of California, Irvine.

(2) Molly and George Hunt are continuing their study of supernormal clutches and lesbian pairing of Western Gulls on the Channel Islands.

III. Washington.

CURRENT RESEARCH--

(1) University of Washington (Wildlife Science Group, College of Forest Resources).

Completed Studies:

1. Reproductive biology and activity of the Rhinoceros Auklet on Protection Island, Washington. Ulrich W. Wilson (MS thesis, 1977).

2. Breeding biology of the Rhinoceros Auklet on Destruction Island. Lora L. Leschner (MS thesis, 1976).

3. The comparative biology of the Tufted and Horned Puffins in the Barren Islands, Alaska. Michael Amaral (MS thesis, 1977).

4. The breeding ecology of the Fork-tailed Storm Petrel on the Barren Islands, Alaska. Dee Boersma and David A. Manuwal.

5. Habitat utilization and activity patterns of the Parakeet Auklet in subarctic Alaska. David A. Manuwal and Naomi J. Manuwal.

(2) University of Washington (Department of Zoology)

Studies in progress:

Effects of foraging by seabirds on intertidal marine invertebrate populations. John Landahl (Ph.D. thesis).

(3) University of Puget Sound (Department of Biology)

Completed Studies:

Biology of an endangered population of Caspian Terns in Grays Harbor. Steven Penland (MS thesis).

ITEMS OF INTEREST--The Pacific Northwest Bird and Mammal Society held an informal workshop on seabird research and conservation on 26 November 1976 at the British Columbia Provincial Museum. Correspondence regarding the workshop should be directed to: Dr. Kees Vermeer, Canadian Wildlife Service, 5421 Robertson Road, Delta, B. C., V4K 3N2 or Mr. Wayne Cambell, B. C. Provincial Museum, Victoria, B. C. The Pacific Northwest Bird and Mammal Society encourages the publication of seabird research of regional significance in its publication The Murrelet. Manuscripts should be sent to the Editor, Dr. Richard E. Johnson, Department of Zoology, Washington State University, Pullman, WA 99163.

David A. Manuwal
Regional Representative
Washington

VII. Mexico. No report received.

Bernardo Villa-Ramirez
Regional Representative
Mexico

VIII. Hawaii.

CURRENT RESEARCH--To my knowledge, no new seabird research projects have been initiated in Hawaii since the last report (vol. 3, #1). However, a report of a short physiological study of the Sooty Tern has been published as a Technical Report (#60) of the International Biological Program in Hawaii--"Oxygen Consumption, Evaporative Water Loss and Body Temperature in the Sooty Tern, Sterna fuscata (1975) by Richard E. MacMillen, G. Causey Whittow, Ernest A. Christopher and Roy J. Ebisu. Limited copies of this report may be available through the IBP, Dept. of Botany, University of Hawaii, Honolulu, HI 96822.

CONSERVATION NOTES--Three conservation issues of significance to Hawaiian seabirds were discussed in Vol. 3(1). This report will serve as an update on the earlier information.

(1) Oahu's offshore islets--Proposed regulation changes for offshore seabird refuges have been delayed by violent opposition of local fishermen to the inclusion of certain islets that are traditional fishing grounds. Compromise proposals, including permitted camping on certain islets, have been suggested, but the fishermen refuse to bend. Fortunately, the most controversial islets are of least significance to seabirds and some changes in the proposed regulation are possible without losing its effectiveness. Resolution of the conflict will probably take several months. I have suggested that the Division of Fish and Game undertake a census program on the islets in the proposed regulation, but it may be some time before this happens.

(2) Hawaiian Islands National Wildlife Refuge--The boundary dispute involving this Refuge is still very much undecided, but negotiations for a three party (Hawaii Fish and Game, U.S. Fish and Wildlife Service, and National Marine Fisheries Service) cooperative study are underway. Mr. Brent Giezentanner, of the U.S. Fish and Wildlife Service, has recently moved to Hawaii, where he will be spearheading cooperative research in the Refuge. Mr. Ed Bryan, of the Bishop Museum in Honolulu, has been contracted to prepare an annotated bibliography of Hawaiian and central Pacific seabirds as a preliminary effort in this study. Active research projects may begin as early as next summer. Also, Merlin Perkins visited the Refuge for his Wild Kingdom show during this last summer. The segment on the Refuge is expected to air sometime this winter. An article in National Geographic about the Leewards is expected to appear in Spring, 1977.

(3) Millicent Quammen, a graduate student at U.C. Irvine is conducting a study of the effect that small shorebirds have on their food supply while feeding on intertidal mudflats. Upper Newport Bay and Mugu Lagoon are the sites where these studies will be carried out.

ITEMS OF INTEREST--

(1) Los Angeles County Museum of Natural History

Ralph W. Schreiber has been appointed Curator of Birds, replacing Kenneth E. Stager, who has retired. Schreiber has conducted extensive research on pelicans, gulls, and other marine birds and looks forward to continuing his research on the west coast and in the tropical Pacific.

(2) San Diego Natural History Museum

J. R. Jehl, Jr. is continuing a long-term study of birds on Los Coronados. Earlier this year the Mexican government announced that, for the first time in many years, tourist groups may be permitted access to the islands. The effect of this policy will be closely followed.

(3) Sea World

Frank Todd, Curator of Birds, reports that Sea World had rehabilitated approximately 40 pelicans this fall, with birds being received from as far away as Las Vegas and Tucson. This high figure may indicate that Gulf of California birds enjoyed a favorable nesting season.

(4) Recent literature:

The following ornithological literature published in the Transactions of the San Diego Society of Natural History, may be of interest. Copies may be ordered through the Library, Natural History Museum, P.O. Box 1390, San Diego, CA 92112.

Jehl, J. R., Jr. and S. I. Bond. 1975. Morphological variation and species limits in murrelets of the Genus Endomychra. Vol. 18, no. 2.

Jehl, J. R., Jr. 1975. Pluvianellus socialis: biology, ecology and relationships of an enigmatic Patagonian shorebird. Vol. 18, no. 3.

Storer, R. W. 1976. The bahavior and relationships of the Least Grebe. Vol. 18, no. 6.

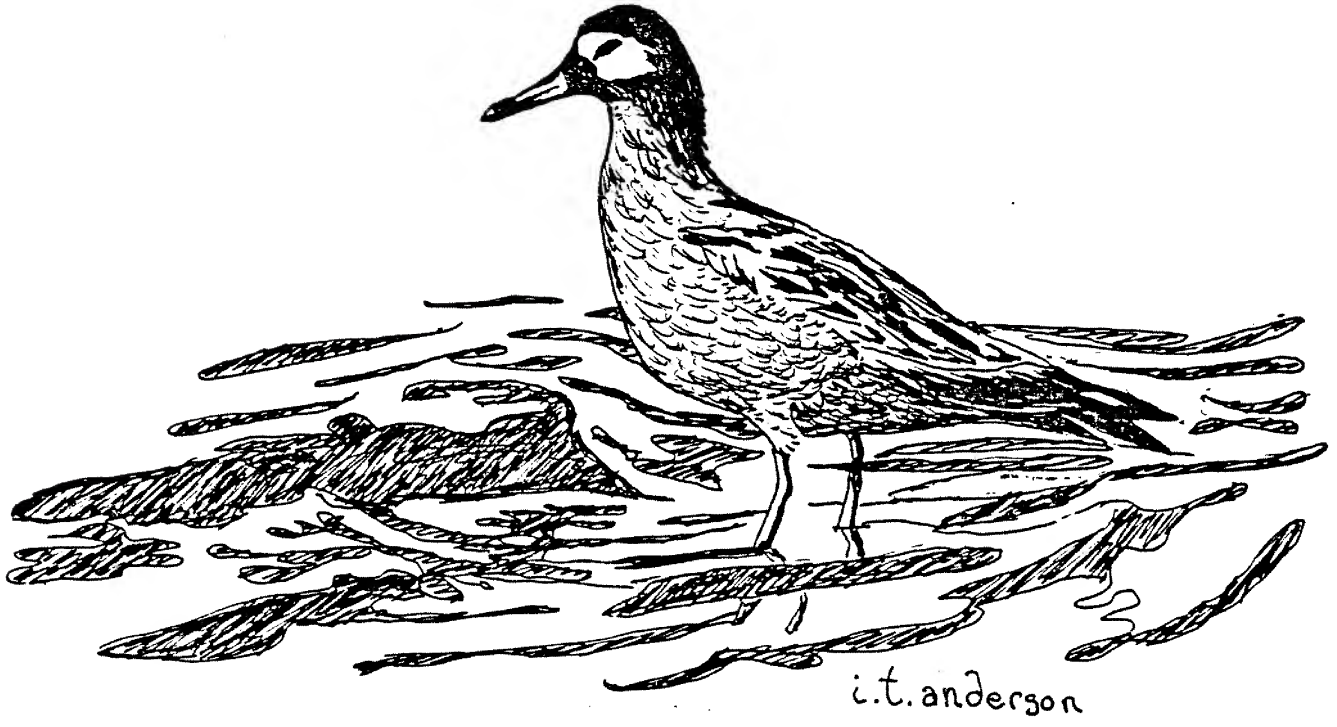
Jehl, J. R., Jr. and M. A. E. Rumboll. Notes on the avifauna of Isla Grande and Patagonia, Argentina. Vol. 18, no. 8.

DeWeese, L. R., and D. W. Anderson. 1976. Distribution and breeding biology of Craveri's Murrelet. Vol. 18, no. 9.

Joseph R. Jehl, Jr.
Regional Representative
Southern California

(3) Kaula and Kahoolawe--The controversy involving the return of Kahoolawe Island to the State of Hawaii is still unresolved. As long as the issue remains undecided, the future of Kaula Island as a bombing target will be uncertain. Biologists from the Fish and Wildlife Service and the State Fish and Game visited the Island again in early September for censusing activities. There has been no document published by either agency regarding the impact of ongoing bombing activities on seabird populations. Nor has there been any attempt to include biologists from outside Federal or State agencies on any of the Kaula visits, despite repeated requests.

Robert J. Shallenberger
Regional Representative
Hawaii



the Antarctic and Subantarctic, and an estimate of krill consumption by birds. Calculations indicated there to be on the order of 188 x 10^6 birds in the southern ocean (south of the subtropical convergence) with a biomass of some 577,000 metric tons. Sixty-five percent of the birds and 55% of the biomass is in the Subantarctic; 65% of total stocks and 90% of the biomass is comprised by penguins. The greatest importance of birds to south polar ecosystems (marine) comes largely through their role as consumers and competitors with mammals (including man). It was estimated that birds consume 38 x 10^6 tons of food per year making them about equal in importance to both pinnipeds and cetaceans. It came out in another part of the meeting, a discussion of a computer simulation model of the Ross Sea pelagic ecosystem (by K. A. Green, Texas A & M University), that penguins are possibly among the most sensitive indicators of ecosystem state and much less expensive to monitor than invertebrates.... quite a concession coming from biological oceanographers! When more complete data are put into the model, particularly on birds, we will be very interested to see where birds then stand.

GENERAL NOTES ON SEABIRD CONSERVATION

THE LIVING RESOURCES OF THE SOUTHERN OCEAN: AN INTERNATIONAL CONFERENCE

by

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If the primary predator of a community is destroyed, then surely this leaves a "surplus" of prey for its former competitors. Or at least that is the basic premise, based only on theory, that propels fisheries organizations to look ever harder at the feasibility of harvesting krill (Euphausiids, particularly Euphausia superba) in the Subantarctic and Antarctic. Now that harvest of southern whales has just about become economically unfeasible, fishing interests are eyeing the whales' food as a resource needing exploitation. Some researchers have gone so far as to say that krill now represents the largest single untapped fishery resource on Earth. For several years the Japanese, and to a much lesser degree the Russians, have been conducting experimental fishing of krill; in 1975, West Germany and Poland organized their first Antarctic expeditions with the sole purpose being to conduct experimental fishing in the Antarctic, particularly on krill.

The growing pressure and interest in further economic exploitation of antarctic living resources led the Scientific Committee on Antarctic Research (SCAR) and the Scientific Committee on Oceanic Research (SCOR), both of the ICSU (International Council of Scientific Unions), to organize an effort to (1) assess the present state of knowledge on the stocks and biology of potentially harvestable organisms in the southern oceans, and (2) to draw up a proposal for coordinated research on the marine communities of that region. The main thrust of this effort came in a meeting at Woodshole, Massachusetts, during mid-August 1975, hosted by the National Academy of Sciences. It was attended by about 60 scientists from 13 countries; these persons conferred mainly within the following working groups: krill; squid and other invertebrate resources; fish; marine mammals and birds. All in all a valuable exchange of information resulted. There is at least some indication that biological research will be coordinated in coming years, and that it will move in a common direction, hopefully, in a total ecosystem approach.

Since I wrote this report for the PSG it seems a summary is due on how birds fared in the meeting. Seabirds were represented primarily by Jean Prevost (France), John Croxall (U.K.) and myself, David Ainley (U.S.A.). We prepared and presented an estimate of seabird biomass in

121 copies of the statement to major west coast and other U.S. newspapers, to pertinent individuals in the Danish, Korean and Japanese embassies in Washington, to several national and local Japanese newspapers, to key NOAA, Interior Department, and state government officials and to U.S. Congressmen.

Although the problem received publicity from a variety of sources, the PSG policy statement was a major factor in bringing it to a head, particularly the mailing of individual copies. At least one Japanese newspaper, "Hokkaido Shinbun," printed the statement (translated into Japanese, of course). A note appeared in the highly-regarded scientific/trade newsletter "Ocean Science News," and other U.S. newspapers no doubt gave the issue due publicity. The Danish government replied to the statement with a polite letter explaining that their North Atlantic gillnet fishery was ending after 1975 (which it has); but until this most recent development, the Korean and Japanese embassies were conspicuously silent.

Replies to the policy statement from several U.S. Congressmen ranged from "thanks for letting me know about the problem," to the concrete action of Rep. Robert L. Leggett (California), Chairman of the Subcommittee on Fisheries and Wildlife Conservation and the Environment, of the House Committee on Merchant Marine and Fisheries. Along with Dillon Ripley's action, Leggett's interest and response to the statement was a key factor in getting the Interior and Commerce Departments to pass the ball to the Department of State where it can now do some good.

The recent passage of the extended coastal jurisdiction law by the U.S. Congress (the U.S. has claimed sovereignty over all ocean waters within 200 miles of all continental and insular U.S. shores), due to become effective spring 1977, could have beneficial effects on curtailing or at least reducing the gillnet mortality. If fisheries managers include protective measures for marine birds in any agreement to foreign fishing within U.S. jurisdiction, the gillnet mortality would be reduced substantially. Thankfully, many fisheries managers appreciate the value of maintaining the balance of the entire oceanic ecosystem, so they will be receptive to ideas for conserving marine birds.

However, although fisheries managers are concerned about the gillnet kill, bird resource managers are uncertain of what the best protective measures might be. Despite the great conspicuousness of marine birds, an adequate knowledge of their habits at sea remains quite elusive. Recent bird research connected with petroleum exploration and development on the North American outer continental shelf is beginning to shed some light on this, but specific studies addressed to the gillnetting problem are needed. A much better knowledge of how far and where marine birds range seaward from breeding colonies is needed, as is a knowledge of how these ranges vary seasonally. We have vague ideas that some species range farther seaward than others, and we believe that the range seaward for a given species may vary from colony to colony, but this needs to be pinned down with confidence and precision. A wide-ranging program of banding, color marking and radio telemetry on several colonies, backed by an extensive monitoring program at sea should reveal the answers to many of these questions. The result would be that marine bird managers could then intelligently recommend seasons and areas when gillnet fishing should be restricted.

UPDATE ON SEABIRD MORTALITY FROM SALMON DRIFTNETS

by

Gerald A. Sanger
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Office of Biological Services
Anchorage, Alaska 99501

A recent deluge of publicity on seabird mortality from salmon gillnet fisheries in the North Pacific, aided by the Pacific Seabird Group's recent policy statement (Policy Statement No. 2, "Incidental Seabird Kills from Salmon Gillnet Fisheries," PSG Bull, 2(1):19-20), has gained the attention of government officials at a level high enough to do some good. A recent telegram from the U.S. Embassy in Tokyo to the Department of State in Washington, D.C. reads in part: "Foreign office (Saito) called 3/16 to give a 'tentative' reply to Embassy's inquiry about GOJ willingness to cooperate in exchange of views on seabird/gillnet problem. Almost verbatim answer was: GOJ is willing to approach the problem in a rational and practical manner in cooperation with USG. The GOJ would like to become better informed on the nature of the problem and therefore would appreciate receiving data on seabird mortality rates and details of the measures which USG might propose to alleviate problems. Word 'tentative' above is construed by Embassy to mean 'informal,' or 'interim'. When asked if GoJ is prepared to meet with U.S. side, Saito said that GOJ would prefer to study written material requested and would then be in better position to decide how to proceed further."

Accordingly, pertinent written material was forwarded to the Japanese Government. They will hopefully respond by agreeing to discuss the matter with U.S. officials and others; this will hopefully lead to protective action.

This favorable development is a result of nearly two years of international publicity. The first public awareness of the problem in the North Pacific came in August 1974, when Warren B. King brought it to the attention of the International Council for Bird Preservation (ICBP) at their meeting in Canberra, Australia. The American Ornithological Union (AOU) aired the situation in January 1975 in the annual report of their Conservation Committee (AUK, 92(1):126-136). During the spring and early summer of 1975, however, the publicity intensified even more. S. Dillon Ripley (Secretary of the Smithsonian Institution) published a review of the issue in the April issue of Smithsonian magazine, and in June 1975, in his capacity as the president of the ICBP, Ripley urged the Department of State to look into the problem "....as a likely violation of the U.S.-Japan Migratory Bird Treaty of 1973...." During the International Symposium on Conservation of Marine Birds in Northern North America in May 1975, Warren King again aired the problem in a scientific paper. The PSG got into the act by publishing their policy statement in the spring 1975 issue of the Bulletin. In mid-June, ex-PSG Chairman Mike Scott (aided mightily behind the scenes by his wife, Sharon) mailed out

Another fruitful avenue of research would be to place observers aboard fishing vessels to monitor the actual extent of gillnet mortality. The only information we now have on the extent of the mortality is based on extrapolations of numbers of birds caught during salmon research gillnetting in areas outside traditional high seas commercial gillnetting areas. Despite future conservation measures, some marine birds will in advertently be caught whenever gillnets are fished. Notwithstanding the legal problems, consideration might be given as to how these drowned birds could be salvaged for use as fertilizers, or perhaps even for human consumption.

Finally, although the problem has gained the attention of high government officials, biologists, resource managers and others interested in the welfare of marine birds need to remain vigilant. Marine birds will not become in fact safe from detrimental gillnet fishing until protective measures are effected and enforced.

TABLE 1

Comparison of estimated breeding numbers and biomass of Canada's and West Greenland's colonial auks.

Species	Breeding population No.	%	Biomass weight (kg)	%	Average body weight in grams (sample size in parentheses)	Source for body weights
Razorbill	39,100	0.4	36,784	0.3	685(7)	Bédard, 1969a
Common Murre	1,307,000	11.9	1,378,885	13.9	1055(375)	Belopolskii, 1961
Thick-billed Murre	8,125,000	74.2	8,060,000	80.8	992(234)	Belopolskii, 1961
Dovekie	12,000	0.1	1,992	0.1	166(8)	Bédard, 1969b, Johnson, 1935
Black Guillemot	50,000	0.5	21,600	0.2	432(120)	Belopolskii, 1961
Ancient Murrelet	200,000	1.8	41,000	0.4	205(154)	Sealy, 1972
Cassin's Auklet	500,000	4.6	84,000	0.8	168(1300)	D.A. Manuwal, pers. comm.
Rhinoceros Auklet	140,000	1.3	75,520	0.7	518(31)*	Author, unpublished data
Tufted Puffin	55,000	0.5	41,525	0.4	755(87)**	Wehle and author, unpublished data
Atlantic Puffin	522,000	4.7	239,076	2.4	458(225)	Nettleship, 1972
Total	10,950,100	100.0→	9,967,382	100.0		

* Measured by author on Triangle Island, British Columbia.

** 80 (average weight: 754.6 grams) measured by Wehle on Buldir Island, Aleution Islands, Alaska; 7 (average weight: 755.7 grams) measured by author on Triangle Island. Dr. D. A. Manuwal and Mr. D. H. S. Wehle are gratefully acknowledged for providing body weight data on Cassin's Auklets and Tufted Puffins, respectively.

GLOBAL MURRE WATCH

by

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Canadian Wildlife Service
5421 Robertson Road
Delta, British Columbia, Canada V4K 3N2

In a recent article (Vermeer, 1976) it has been pointed out that colonial auks may serve as the best indicators of the effects of oil pollution on seabird populations in the northern hemisphere as their colonies can be relatively easily surveyed, and as accurate parameters on their breeding populations, reproductive success and population turnover rates can be measured. Since murres are widely distributed, are among the most numerous, conspicuous and largest of the auks, and are highly vulnerable to oil it is suggested here that a GLOBAL MURRE WATCH should be initiated by marine ornithologists. If such a WATCH would be kept there would be exact breeding population data available over the years for at least one group of seabirds against which the effects of oil pollution, and perhaps other effects such as gillnetting, can be measured on a world-wide scale.

Murres constitute 86% of Canada's and West Greenland's colonial auks and 95% of their biomass (Table 1). Canada's Atlantic, Eastern Arctic and West Greenland's breeding populations are calculated from Brown et al, 1975 and those from Canada's west coast are from unpublished data of the writer. Preliminary population figures shown in Table 1 will change with more accurate estimates, discovery of new colonies, and with better understanding of population fluctuations. Biomass figures will be improved with more quantitative information on body weights of local races of auks. Ornithologists wishing to participate in a GLOBAL MURRE WATCH should notify the writer.

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SHORT-TAILED ALBATROSS POPULATION INCREASING

by

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Anchorage, Alaska

Those interested in the endangered Short-tailed Albatross (Diomedea albatrus), the largest North Pacific seabird, will be glad to learn that their population has been increasing, albeit slowly. From an estimated world population of "...perhaps as high as 75-100 birds" (Sanger, 1972, Biol. Conserv., 4(3):189-193) based on a 1967 breeding ground count and estimated numbers at sea, the population had increased to a count of 11 fledged chicks and an estimated 57 breeding pairs on the Torishima Island colony in May 1973 (Tickell, 1973, Sea Swallow, 23:1-4). Since immatures spend all or most of the breeding season at sea, the total world population must then be well over 125 birds. This is a heartening indication indeed, considering that only 25 birds total were estimated on Torishima in 1955 (Ono, 1955, Tori, 14:24-32).

A report of a pioneering colony of 12 Short-tails on Senkaku-Rettó Island (550 km SW of Torishima and 200 km NE of Formosa) is intriguing, but it may be suspect (W. L. N. Tickell, personal correspondence). Tickell plans to verify this report by visiting the Senkakus during a future breeding season. If the report is true, however, the species has gained yet another toehold on existence and would seem to be less threatened by the recurring volcanic activity on Torishima, the only confirmed breeding colony for the species.

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EDITOR'S NOTES: I am grateful to my wife, Irene Trautt Anderson, for doing the ink drawings of Alaskan seabirds, and for typing this issue of the PSG Bulletin. Her time has been entirely voluntary. Donald M. Baltz also aided in compiling and organizing our membership list, no easy task.

The PSG Bulletin solicits help (typing, artistry, etc.) for future bulletins. We can offer free PSG memberships to those who aid significantly in producing PSG Bulletins.

The PSG Bulletin also accepts short articles or notes on marine or waterbird conservation. Please submit them to me in the form of the articles of this issue.

Daniel W. Anderson
Editor
January 1977

PACIFIC SEABIRD GROUP

DEDICATED TO THE STUDY AND CONSERVATION OF PACIFIC SEABIRDS AND THEIR ENVIRONMENT

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1976

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